State of Illinois
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Illinois Environmental Protection Agency
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Fact Sheet #1

Groundwater Contamination at former dry cleaner site – 3004 W. Elm St.

McHenry, Illinois

Background

This property is located on the east side of the Fox River in McHenry on Elm Street (Route 120). Gem Cleaners occupied the site from 1970 to 1977, after which it was occupied by carpet dealers, an automotive repair facility, and a tire store. The site is approximately 1/3 of an acre on which a 4,782 square-foot building is currently a car rental business. The site is located in a mixed industrial, commercial and residential area. Parts of the area are incorporated, and some are not. Currently, the public water supply is only available to some properties along Route 120, where there is a water main in place. Most of the homes and businesses use private wells for their water source.

Historic use of solvents at this location has resulted in contamination of the soil and groundwater by Volatile Organic Compounds (VOCs). These are common chemicals found in industrial and commercial solvents. Soil contamination appears to be associated with a former septic field and another spill area on-site. Groundwater contamination appears to extend beyond the property boundaries. The Fox River is located approximately 1100 feet west of the site. The consultant for the site owner is currently determining the rate and extent of the groundwater contamination.

Since the soil type in this area is conducive to movement of water through it, and the contamination is soluble in water, the Illinois EPA and the Illinois Dept. of Public Health recommend that anyone who lives near this site (within the boundaries on the attached map) and uses a well for their source of drinking water have their well tested.

What contaminants were found at this site?	The highest concentrations of chemicals found in groundwater at this site are: Tetrachloroethylene (PCE) - 15.0 milligrams per liter (mg/l) Trichloroethylene (TCE) - 2.6 mg/l Cis-1,2-Dichloroethene - 8.0 mg/l Vinyl Chloride - 3.4 mg/l
What is a safe drinking water comparison value for each of these?	The Maximum Contaminant Level (MCL) approved by U.S. EPA as a safe level at which no adverse health effects would be expected: PCE - .005 mg/l TCE - .005 mg/l Cis-1,2 DCE - .070 mg/l Vinyl Chloride - .002 mg/l

What adverse health effects are related to exposure to VOCs such as TCE or PCE?	Exposure to levels of TCE and PCE much greater than those levels found in the McHenry area wells can cause nausea, dizziness or headaches. Exposure to low levels over long periods may lead to impaired immune system function and may increase the risk of kidney or liver cancer or other damage.
If my well water has concentrations that exceed these "safe levels," what should I do?	When you have your well water tested, you may ask a toxicologist at the Illinois Department of Public Health (IDPH) to review these results with you for possible health implications. The phone number for IDPH West Chicago Regional office is 630/293-6800. IDPH recommends that owners of wells containing these contaminants equal to or greater than the MCL comparison standards not use their wells as a source of drinking water to reduce exposure to these contaminants.
How can I reduce my exposure to VOCs?	If your water contains VOCs, you can greatly reduce your exposure by using another source of drinking water or by using water filtration equipment designed to remove VOCs. Since VOCs evaporate into the air, you can reduce your exposure by running the bathroom exhaust fan during baths and showers. Exposure to VOCs from other water uses should be very small.
Who do I talk to about testing my well?	Commercial labs that are certified to analyze samples for chemicals such as VOCs can be found by going to the Illinois EPA web site at: http://www.epa.state.il.us/well-water/list-accredited-labs.html Discuss the cost of testing with the laboratory. A list of chemical parameters to test for is on the last page of this fact sheet.
If contamination is found in my well, will the state force me to change over to a public water supply?	Neither Illinois EPA nor Illinois Department of Public Health would "force" a citizen to abandon a private well in this circumstance. IDPH will advise residents of any well contamination and make recommendations about changes in water use. Private wells are the domain of the well owner.
Should I install a filter system to remove this type of contamination?	Activated carbon filtration whole-house systems effectively remove volatile organic chemicals. A homeowner should look for systems that are ANSI-approved or NSF (National Sanitation Foundation)-approved. A source of information about water filtration systems is Water Quality Association, 630/505-0160 at www.wqa.org
What has recent testing of private wells shown?	Last week, the McHenry County Health Dept. sampled seven wells in the area. In three of the wells, vinyl chloride was detected at low levels – below the MCL comparison value. The McHenry County Health Dept. has contacted those well owners of the findings. The site owner is also testing some area residential wells this week, and the County Health Dept. plans to test more wells in the area. That will provide additional information to relay to area residents in the next fact sheet.

Will the contamination be cleaned up?	Yes. The current owner of the site is enrolled in an Illinois EPA cleanup program and is committed to cleaning up the contamination. Currently, the consultant for the owner is developing a Remediation Objectives Report for the Agency, and we expect to receive that later this month. Once the cleanup objectives are approved, Illinois EPA will review a Remediation Plan document, so the consultant may proceed with a remedy for the solvent contamination in the soil. We anticipate that the remedy may begin in April or May of 2007. Contamination in the groundwater that may have left the site is a separate matter. Illinois EPA will review results of groundwater modeling that will show whether site contaminants already exist off-site. Once we have that information, we will meet with the Remedial Applicant to decide next steps, and we will send an update to the mailing list for this site.

For more information, you may contact:

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Site at 3004 W. Elm Street, McHenry, Illinois

List of VOC Chemicals to test for	
Chemical	**Standard (mg/L)**
Benzene	0.005
Dichloromethane	0.005
ortho-Dichlorobenzene	0.6
para-Dichlorobenzene	0.075
1,2-Dichloroethane	0.005
1,1-Dichloroethylene	0.007
cis-1,2-Dichloroethylene	0.07
trans-1,2-Dichloroethylene	0.1
1,2-Dichloropropane	0.005
Ethylbenzene	0.7
Methyl Tertiary-Butyl Ether	0.07
Monochlorobenzene	0.1
Styrene	0.1
Tetrachloroethylene	0.005
Toluene	1.0
1,1,1-Trichloroethane	0.2
1,1,2-Trichloroethane	0.005
1,2,4-Trichlorobenzene	0.07
Trichloroethylene	0.005
Vinyl Chloride	0.002
Xylenes	10.0

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